



#22/E

463.4.TXT

SEQUENCE LISTING

<110> Joyce, Gerald F.  
Breaker, Ronald R.

<120> ENZYMATIC DNA MOLECULES

<130> TSRI 463\_4

<140> US 09/423,035

<141> 2000-01-13

<150> PCT/US98/08677

<151> 1998-04-29

<150> US 60/045,228

<151> 1997-04-29

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463.4.TXT

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463.4.TXT

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<210> 98  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 98  
 cacaagaaag tgctgtctcc agatatttga gtacaaggaa ctacgccc 48

<210> 99  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 99  
 catgaagaaa taggacattc tacaggctgg accgttacta tgctgtagg 50

<210> 100  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 100  
 cataggataa tcatggcgat gcttatgacg tgtacatcta tacctt 46

<210> 101  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

463.4.TXT

<400> 101  
cagatgatct tccttttaaag actacccttt aaagaaacat aaggtacccc 50

<210> 102  
<211> 17  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 102  
ggagagagau gggugcg 17

<210> 103  
<211> 15  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 103  
gagagagaug ggugc 15

<210> 104  
<211> 17  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 104  
caguggcaau gagagug 17

<210> 105  
<211> 15  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 105  
aguggcaaug agagu 15

<210> 106  
<211> 17  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 106  
gaggauagau ggaacaa 17

<210> 107  
<211> 15  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 107  
aggauagaug gaaca 15

<210> 108  
<211> 15  
<212> RNA  
<213> Human Immunodeficiency Virus

<400> 108  
gcaagaaaug gagcc 15

<210> 109  
<211> 15  
<212> RNA

<213> Human Immunodeficiency Virus

<400> 109

cuauaagaug gguga

15

<210> 110

<211> 20

<212> RNA

<213> Feline infectious peritonitis virus

<400> 110

uacagcaaca uggggaugg

20

<210> 111

<211> 18

<212> RNA

<213> Feline infectious peritonitis virus

<400> 111

cauggggaau ggacagg

18

<210> 112

<211> 23

<212> RNA

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 112

caaauaaaag ggaugaaguc ugg

23

<210> 113

<211> 21

<212> RNA

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 113

aaggaaugaa gucuggcucc g

21

<210> 114

<211> 23

<212> RNA

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 114

auaccgcaaa gucuugaga auu

23

<210> 115

<211> 23

<212> RNA

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 115

aagucuuuga gaguuuccug cac

23

&lt;210&gt; 116

&lt;211&gt; 19

&lt;212&gt; RNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 116

aacaccacca uguccagcc

19

&lt;210&gt; 117

&lt;211&gt; 20

&lt;212&gt; RNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 117

ggccuuucac auuguaccgc

20

&lt;210&gt; 118

&lt;211&gt; 21

&lt;212&gt; RNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 118

uuguaccgca ucgauaucca c

21

&lt;210&gt; 119

&lt;211&gt; 23

&lt;212&gt; RNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 119

gaacauuaca uuauagugac cag

23

&lt;210&gt; 120

&lt;211&gt; 14

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthesized

&lt;400&gt; 120

tccgagccgg acga

14

&lt;210&gt; 121

&lt;211&gt; 16

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Synthesized

<221> misc\_feature

<222> 1

<223> R= A or G

<400> 121

rggctagcta caacga

16

<210> 122

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> misc\_feature

<222> 1

<223> R = A or G

<221> misc\_feature

<222> 9

<223> H = A, C, or T

<400> 122

rggctagcha caacga

16

<210> 123

<211> 79

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> misc\_difference

<222> 18

<223> N = Adenosine Ribonucleotide

<400> 123

ctaatacgac tcaactatngg aagagatggc gacatctctt cagcgatgca cgcttggttt 60  
aatgttgac ccatgttag 79

<210> 124

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 124

gtgccaagct taccgagtaa ctctgtccgg ctcggragat gggtcgtctg tccttccatc 60  
tctagttact ttttc 75

<210> 125

<211> 78

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

463.4.TXT

<400> 125  
gttgccaagc ttaccgggaa aaatcggtgt agctagccta actaggtcgt ctgtccttcc 60  
atctctagtt actttttc 78

<210> 126  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthesized

<400> 126  
ggaaggacag acgacccatc 20

<210> 127  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthesized

<400> 127  
gtgccaagct taccgggaaa aa 22

<210> 128  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthesized

<221> misc\_feature  
<222> 22  
<223> N = Adenosine Ribonucleotide

<400> 128  
ggaaggacag acgacctagt tn 22

<210> 129  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthesized

<400> 129  
gaaaaagtaa ctagagatgg aaggacagac gacc 34

<210> 130  
<211> 80  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthesized

<400> 130  
cacgggtcga atggcggttat gcatcacact atttttcatt gaagcaggcc gaggctttcca 60



ccttccagcg gtagagaagg

<210> 131  
 <211> 77  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 131  
 cacggttcga atggcatgtt aagttcgtcc ctttttagca acatcgatcg gattgggttc 60  
 ccagcggta gagaagg 77

<210> 132  
 <211> 34  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<221> misc\_feature  
 <222> (1)...(21)  
 <223> Positions 1 to 21 are RNA; the rest of the  
 molecule is DNA

<221> misc\_feature  
 <222> 1  
 <223> Optional 5 prime biotinylation

<400> 132  
 ggaaaaagua acuagagaug gaagagatgg cgac 34

<210> 133  
 <211> 72  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<221> misc\_feature  
 <222> (29)...(68)  
 <223> N = A, G, T, or C

<400> 133  
 tcactatngg aagagatggc gacatctcnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60  
 nnnnnnnngt ga 72

<210> 134  
 <211> 34  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<400> 134  
 cttccacctt ccgagccgga cgaagttact tttt 34

<210> 135  
 <211> 24

<212> RNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 135  
 ggaaaaagua acuagagaug gaag 24  
  
 <210> 136  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 136  
 ctttggtag gctagctaca acgatttttc c 31  
  
 <210> 137  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 137  
 ctagttaggc tagctacaac gatttttcc 29  
  
 <210> 138  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <400> 138  
 ccaccttccg agccggacga agttact 27  
  
 <210> 139  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthesized  
  
 <221> misc\_feature  
 <222> 28  
 <223> N = Adenosine Ribonucleotide  
  
 <400> 139  
 gggacgaatt ctaatacgac tcactatngg aagatatggc gaca 44  
  
 <210> 140  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>

<223> Synthesized

<221> misc\_feature

<222> (5)...(44)

<223> N = A, G, T, or C

<400> 140

tctcnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnngtga

48

<210> 141

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> misc\_feature

<222> 28

<223> N = Adenosine Ribonucleotide

<400> 141

gggacgaatt ctaatacgac tcactatngg aagagatggc gacatctc

48

<210> 142

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<400> 142

gtgacggtaa gcttggcac

19

<210> 143

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> misc\_feature

<222> (1)...(40)

<223> N = A, G, T, or C

<400> 143

nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn nnnnnnnnnnn

40

<210> 144

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized

<221> misc\_RNA

<222> (8)...(19)

<223> Positions 8 to 19 are RNA, the remainder of the molecule is DNA

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<221> misc_feature
<222> 1
<223> Optional 5 prime biotinylation

<400> 144
ggaaaaagua acuagagaug gaagagatgg cgac
34

<210> 145
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized

<221> misc_feature
<222> 1
<223> Optional 5 prime biotinylation

<400> 145
ggaagagatg gcgac
15

<210> 146
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized

<221> misc_feature
<222> (1)...(50)
<223> N = A, G, T, or C

<400> 146
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn
50

<210> 147
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized

<400> 147
gtgccaagct taccgagtaa ct
22

<210> 148
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthesized

<221> misc_feature
<222> 21
<223> Position 21 is ribo uracil, the remainder of the
molecule is DNA

<400> 148
ggaaggacag acgacccatc u
21

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463.4.TXT

<210> 149  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<221> misc\_feature  
 <222> 22  
 <223> Position 22 is ribo adenosine, the remainder of  
 the molecule is DNA

<400> 149  
 ggaaggacag acgacctagt ta 22

<210> 150  
 <211> 11  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthesized

<221> misc\_feature  
 <222> 1  
 <223> Optional 5 prime biotinylation

<400> 150  
 ggaaggacag a 11